

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently amended) A computer controlled method in a provisioning
2 device in a networked computer system comprising an execution mechanism
3 configured to execute the method, the method comprising:
4 establishing communication between the provisioning device and the
5 network device over a preferred channel, wherein the preferred channel is a
6 bidirectional, location-limited channel which has a demonstrative identification
7 property and an authenticity property;
8 pre-authenticating said network device, wherein pre-authenticating said
9 network device involves:
10 exchanging key commitment information ~~over said preferred~~
11 ~~channel~~ between said provisioning device and said network device over
12 said bidirectional preferred channel to pre-authenticate said network
13 device;
14 exchanging keys between said provisioning device and said
15 network device over a bidirectional channel that does not have to be the
16 preferred channel; and
17 verifying the received keys using the received key commitment
18 information on both the said provisioning device and said network device;
19 providing provisioning information to said network device over said
20 bidirectional preferred channel, wherein the provisioning information comprises:

21 a first set of provisioning information which is used exclusively to
22 establish secure and authenticated communication between the
23 provisioning device and the said network device using a second channel,
24 wherein the second channel need not be location-limited; and
25 other provisioning information;
26 whereby said network device can automatically configure itself for secure
27 communication over a network responsive to said first and other provisioning
28 information, wherein the secure communication can be over the second channel.

1 2. (Original) The computer controlled method of claim 1, wherein said
2 provisioning information comprises network configuration information.

1 3. (Original) The computer controlled method of claim 1, further comprising
2 receiving a public key from said network device;
3 verifying said public key with said key commitment information; and
4 automatically provisioning said network device with a credential
5 authorized by a credential issuing authority.

1 4. (Original) The computer controlled method of claim 3, further comprising
2 establishing proof that said network device is in possession of a private
3 key corresponding to said public key.

1 5. (Original) The computer controlled method of claim 3, wherein said
2 credential issuing authority is a certification authority and said credential
3 is a public key certificate.

- 1 6. (Original) The computer controlled method of claim 3, wherein the step of
2 automatically provisioning is responsive to authorization from a
3 registration agent.
- 1 7-8 (Canceled).
- 1 9. (Original) The computer controlled method of claim 1, wherein the
2 network is a wireless network, and wherein said provisioning device is a
3 wireless access point.
- 1 10. (Original) The computer controlled method of claim 9, further comprising:
2 receiving a wireless communication;
3 determining whether said wireless communication originated from
4 said network device or from a second network device that was not
5 provisioned by said wireless access point; and
6 routing said wireless communication responsive to the step of
7 determining.
- 1 11. (Original) The computer controlled method of claim 10, wherein the step
2 of routing comprises:
3 choosing a selected channel from a secure channel and an insecure
4 channel responsive to the step of determining; and
5 sending said wireless communication through said selected channel.
- 1 12. (Original) The computer controlled method of claim 1, wherein said
2 provisioning device is in communication with a credential issuing
3 authority.

1 13. (Currently amended) A computer-readable storage medium storing
2 instructions that when executed by a computer cause the computer to perform a
3 method to provision a network device, the method comprising steps of:

4 establishing communication between the provisioning device and
5 said network device over a preferred channel, wherein the preferred
6 channel is a bidirectional, location-limited channel which has a
7 demonstrative identification property and an authenticity property;

8 pre-authenticating said network device, wherein pre-authenticating
9 said network device involves:

10 exchanging key commitment information ~~over said preferred~~
11 ~~channel~~ between said provisioning device and said network device over
12 said bidirectional preferred ~~to pre-authenticate said network device;~~

13 exchanging keys between said provisioning device and said
14 network device over a bidirectional channel that does not have to be the
15 preferred channel; and

16 verifying the received keys using the received key commitment
17 information on both the said provisioning device and said network device;

18 providing provisioning information to said network device over
19 said bidirectional preferred channel, wherein the provisioning information
20 comprises:

21 a first set of provisioning information which is used exclusively to
22 establish secure and authenticated communication between the
23 provisioning device and the said network device using a second channel,
24 wherein the second channel need not be location-limited; and

25 other provisioning information;

26 whereby said network device can automatically configure itself for
27 secure communication over a network responsive to said first and other

28 provisioning information, wherein the secure communication can be over
29 the second channel.

1 14. (Original) The computer-readable storage medium of claim 13, further
2 comprising
3 receiving a public key from said network device;
4 verifying said public key with said key commitment information; and
5 automatically provisioning said network device with a credential
6 authorized by a credential issuing authority.

1 15. (Original) The computer-readable storage medium of claim 13, wherein
2 the network is a wireless network, and wherein said provisioning device is
3 a wireless access point.

1 16. (Currently amended) An apparatus for provisioning a network device
2 comprising:
3 at least one port configured to establish a preferred channel;
4 a preferred communication mechanism configured to be able to
5 establish communication with and said network device over said preferred
6 channel, wherein the preferred channel is a bidirectional, location-limited channel
7 which has a demonstrative identification property and an authenticity property;
8 a pre-authentication mechanism configured to be able to;
9 receive key commitment information over said preferred
10 channel from said network device;
11 exchange keys between said provisioning device and said
12 network device over a bidirectional channel that does not have to be
13 the preferred channel; and

14 verify the received keys using the received key
15 commitment information on both said provisioning device and said
16 network device;
17 a provisioning mechanism configured to provide provisioning
18 information to said network device over said bidirectional preferred channel,
19 wherein the provisioning information comprises:
20 a first set of provisioning information which is used
21 exclusively to establish secure and authenticated communication between
22 the provisioning device and the said network device using a second
23 channel, wherein the second channel need not be location-limited ; and
24 other provisioning information;
25 whereby said network device can automatically configure itself for
26 secure communication over a network responsive to said first and other
27 provisioning information, wherein the secure communication can be over the
28 second channel.

1 17. (Original) The apparatus of claim 16, wherein said provisioning
2 information comprises network configuration information.

1 18. (Original) The apparatus of claim 16, further comprising
2 a key reception mechanism configured to receive a public key;
3 a key verification mechanism configured to verify said public key
4 with said key commitment information; and
5 a credential provisioning mechanism configured to automatically
6 provide a credential authorized by a credential issuing authority.

- 1 19. (Original) The apparatus of claim 18, further comprising a key exchange
2 mechanism configured to be able to perform a key exchange protocol with
3 said network device.
- 1 20. (Original) The apparatus of claim 18, wherein said credential issuing
2 authority is a certification authority and said credential is a public key
3 certificate.
- 1 21-22 (Canceled).
- 1 23. (Original) The apparatus of claim 22, further comprising:
2 a packet receiver mechanism configured to receive a wireless
3 communication;
4 a determination mechanism configured to determine whether said
5 wireless communication received by the packet receiver mechanism
6 originated from said network device or from a second network device that
7 was not provisioned by said wireless access point; and
8 a router mechanism configured to route said wireless communication
9 responsive to the determination mechanism.
- 1 24. (Original) The apparatus of claim 23, wherein the router mechanism
2 further comprises:
3 a channel selection mechanism configured to choose a selected
4 channel from a secure channel and an insecure channel responsive to the
5 determination mechanism; and
6 a transmission mechanism configured to send said wireless
7 communication through said selected channel.

1 25. (Original) The apparatus of claim 16, further comprising a non-preferred
2 communication mechanism that can be used to communicate with a
3 credential issuing authority.

1 26-66. (Canceled)